

AXCMK-HF C / AXQJ C / IFSI-AI C

Aluminium power cable HF

0,6/1 (1,2) kV



Application

Aluminium power cable for fixed installations indoors and outdoors. May be buried directly in soil. Can also be used in medical facilities where higher fire class is required. The conductor insulation must be protected against UV-radiation. Installations must be in accordance with national regulations and rules of installations. The cable is halogen-free and flame-retardant according to CPR-class Cca-s1,d1,a1.

Design

| | |
|--|--|
| Standards | SFS 5546, SEK TS 424 14 18-1, HD 604 5 I & D, IEC 60502-1 |
| Reaction to fire | Cca-s1,d1,a1; EN 13501-6, EN 50575:2014+A1:2016 |
| Product Environmental Profile (PEP/EPD) | PEP NXNS-00560-V01.01-EN |
| Conductor | 25 mm ² circular stranded aluminium, EN/IEC 60228 class 2 35-300 mm ² sector shaped, stranded aluminium, EN/IEC 60228 class 2 |
| Insulation | Cross-linked polyethylene XLPE |
| Core Identification | Brown, black, grey Blue, brown, black, grey |
| Inner covering | Plastic tape |
| Metal screen | Copper wires and copper tape |

Temperature limits

| | |
|---|-----|
| Max. conductor temperature °C | 90 |
| Max. cond. temp. short circuit max. 5 s °C | 250 |
| Min. cable temperature during operation °C | -50 |
| Min. cable temperature during handling °C | -15 |
| Min. cable temperature during transport °C | -25 |

Oversheath

UV-protected polyolefin compound , Black

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| Technical information | 3x35/16 | 3x50/16 | 3x70/21 | 3x95/29 | 3x120/41 | 3x150/41 | 3x185/57 | 3x240/72 | 3x300/88 | 4x25/16 |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Product code | 1149242 | 1149243 | 1149244 | 1149245 | 1149246 | 1149247 | 1149248 | 1149249 | 1149250 | 1149253 |
| Nominal cable diameter mm | 22 | 24 | 28 | 32 | 36 | 40 | 45 | 48 | 56 | 26 |
| Nominal cable weight kg/km | 682 | 821 | 1133 | 1487 | 1907 | 2233 | 2807 | 3578 | 4443 | 936 |
| Nominal weight of copper kg/km | 149 | 149 | 197 | 260 | 370 | 370 | 516 | 651 | 810 | 149 |
| Nominal weight of Aluminium kg/km | 273 | 375 | 544 | 751 | 949 | 1165 | 1414 | 1910 | 2357 | 264 |
| Nominal Insulation thickness mm | 0,9 | 1,0 | 1,1 | 1,1 | 1,2 | 1,4 | 1,6 | 1,7 | 1,8 | 0,9 |
| Nominal size of metal screen mm ² | 16 | 16 | 21 | 29 | 41 | 41 | 57 | 72 | 88 | 16 |
| Nominal thickness of oversheath mm | 1,8 | 1,8 | 2,0 | 2,1 | 2,3 | 2,3 | 2,5 | 2,7 | 3,0 | 1,8 |
| Fire load | | | | | | | | | | |
| Fire load MJ/m | 6,097 | 7,305 | 9,790 | 11,831 | 14,568 | 18,301 | 23,249 | 26,896 | 33,089 | 8,493 |
| Fire load kWh/m | 1,694 | 2,029 | 2,719 | 3,286 | 4,046 | 5,084 | 6,458 | 7,471 | 9,191 | 2,359 |
| Maximum forces during installation when pulling by | | | | | | | | | | |
| Max. pulling force by pulling-eye kN | 1,6 | 2,3 | 3,2 | 4,3 | 5,4 | 6,8 | 8,3 | 10,8 | 13,5 | 1,5 |
| Max. pulling force by pulling-stocking kN | 1,6 | 2,3 | 3,2 | 4,3 | 5,4 | 6,8 | 8,3 | 8,5 | 8,5 | 1,5 |
| Minimum bending radii | | | | | | | | | | |
| Minimum bending radius, handling mm | 266 | 285 | 332 | 385 | 433 | 475 | 538 | 581 | 673 | 316 |
| Minimum bending radius, final bending mm | 186 | 200 | 232 | 270 | 303 | 332 | 377 | 407 | 471 | 221 |
| Minimum bending radii | | | | | | | | | | |
| During handling and installation, phase conductor cm | 17 | 20 | 24 | 27 | 31 | 35 | 38 | 43 | 50 | 9 |
| During handling and installation, cable cm | 27 | 29 | 33 | 39 | 43 | 47 | 54 | 58 | 67 | 32 |
| In final installation, phase conductor cm | 12 | 14 | 17 | 19 | 22 | 24 | 27 | 30 | 35 | 6 |
| In final installation, cable cm | 19 | 20 | 23 | 27 | 30 | 33 | 38 | 41 | 47 | 22 |
| Minimum bending radii | | | | | | | | | | |
| During handling and installation, cable m | 0,27 | 0,28 | 0,33 | 0,39 | 0,43 | 0,47 | 0,54 | 0,58 | 0,67 | 0,32 |
| In final installation, cable m | 0,19 | 0,20 | 0,23 | 0,27 | 0,30 | 0,33 | 0,38 | 0,41 | 0,47 | 0,22 |
| DC resistance | | | | | | | | | | |
| Max. DC resistance of conductor at 20 °C Ω/km | 0,868 | 0,641 | 0,443 | 0,320 | 0,253 | 0,206 | 0,164 | 0,125 | 0,100 | 1,20 |
| Maximum DC resistance at 20 °C, metal screen Ω/km | 1,15 | 1,15 | 0,868 | 0,641 | 0,443 | 0,443 | 0,320 | 0,253 | 0,206 | 1,15 |

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| Technical information | 3x35/16 | 3x50/16 | 3x70/21 | 3x95/29 | 3x120/41 | 3x150/41 | 3x185/57 | 3x240/72 | 3x300/88 | 4x25/16 |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Current ratings | | | | | | | | | | |
| Cables in air (25 °C) | | | | | | | | | | |
| two loaded conductor, conductor 70 °C A | 115 | 140 | 180 | 218 | 254 | 293 | 335 | 395 | 457 | 93 |
| three loaded conductor, conductor 70 °C A | 100 | 122 | 156 | 190 | 220 | 255 | 291 | 343 | 396 | 81 |
| two loaded conductor, conductor 90 °C A | 140 | 171 | 219 | 267 | 312 | 360 | 413 | 489 | 565 | 112 |
| three loaded conductor, conductor 90 °C A | 125 | 152 | 194 | 236 | 274 | 316 | 361 | 425 | 490 | 101 |
| Cables in air (30 °C) | | | | | | | | | | |
| two loaded conductor, conductor 70 °C A | 111 | 135 | 173 | 210 | 244 | 282 | 322 | 380 | 439 | 89 |
| three loaded conductor, conductor 70 °C A | 96 | 117 | 150 | 183 | 212 | 245 | 280 | 330 | 381 | 78 |
| two loaded conductor, conductor 90 °C A | 135 | 164 | 211 | 257 | 300 | 346 | 397 | 470 | 543 | 108 |
| three loaded conductor, conductor 90 °C A | 120 | 146 | 187 | 227 | 263 | 304 | 347 | 409 | 471 | 97 |
| Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m | | | | | | | | | | |
| Cables in the ground, conductor 65 °C A | 125 | 150 | 185 | 220 | 255 | 280 | 330 | 375 | 430 | 100 |
| Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m | | | | | | | | | | |
| Cables in the ground, conductor 90 °C A | 98 | 117 | 144 | 172 | 197 | 220 | 250 | 290 | 326 | 82 |
| Maximum thermal short circuit current during 1 s | | | | | | | | | | |
| Phase (initial 65 °C, final 250 °C) kA | 3,6 | 5,2 | 7,3 | 9,8 | 12,4 | 15,5 | 19,2 | 24,9 | 31,1 | 2,6 |
| Phase (initial 90 °C, final 250 °C) kA | 3,4 | 4,8 | 6,7 | 9,0 | 11,4 | 14,2 | 17,5 | 22,6 | 28,2 | 2,4 |
| Metal screen (initial 80 °C, final 250 °C) kA | 2,4 | 2,4 | 3,1 | 4,3 | 6,1 | 6,1 | 8,5 | 10,7 | 13,0 | 2,4 |
| Environmental information | | | | | | | | | | |
| (A1-A3) GWP emission kgCO2e/km | 4756 | 5895 | 8450 | 11349 | 14789 | 17459 | 22160 | 28474 | 35558 | 6836 |
| GWP emissions calculation standard | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 |

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| STANDARD PACKAGES | 3x35/16 | 3x50/16 | 3x70/21 | 3x95/29 | 3x120/41 | 3x150/41 | 3x185/57 | 3x240/72 | 3x300/88 | 4x25/16 |
|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Product code | 1149242 | 1149243 | 1149244 | 1149245 | 1149246 | 1149247 | 1149248 | 1149249 | 1149250 | 1149253 |
| GTIN code | 6438176300756 | 6438176300770 | 6438176300794 | 6438176300800 | 6438176300817 | 6438176300824 | 6438176300831 | 6438176300848 | 6438176300855 | 6438176300879 |
| Package | 1000 K16 | 1000 K16 | 1000 K18 | 500 K16 | 500 K18 | 500 K18 | 500 K20 | 500 K22 | 500 K24 | 1000 K18 |
| Product code | 1149242 | 1149243 | 1149244 | | | | | | | 1149253 |
| GTIN code | 6438176300749 | 6438176300763 | 6438176300787 | | | | | | | 6438176300862 |
| Package | 500 K12 | 500 K12 | 500 K14 | | | | | | | 500 K14 |

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| Technical information | 4x35/16 | 4x50/16 | 4x70/21 | 4x95/29 | 4x120/41 | 4x150/41 | 4x185/57 | 4x240/72 | 4x300/88 |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Product code | 1149254 | 1149255 | 1149256 | 1149257 | 1149258 | 1149259 | 1149260 | 1149261 | 1149262 |
| Nominal cable diameter mm | 24 | 28 | 31 | 35 | 41 | 45 | 50 | 57 | 60 |
| Nominal cable weight kg/km | 816 | 1030 | 1401 | 1785 | 2351 | 2802 | 3471 | 4514 | 5447 |
| Nominal weight of copper kg/km | 149 | 149 | 197 | 259 | 370 | 370 | 516 | 651 | 809 |
| Nominal weight of Aluminium kg/km | 364 | 500 | 725 | 961 | 1265 | 1554 | 1886 | 2547 | 3143 |
| Nominal Insulation thickness mm | 0,9 | 1,0 | 1,1 | 1,1 | 1,2 | 1,4 | 1,6 | 1,7 | 1,8 |
| Nominal size of metal screen mm ² | 16 | 16 | 21 | 29 | 41 | 41 | 57 | 72 | 88 |
| Nominal thickness of oversheath mm | 1,8 | 1,9 | 2,1 | 2,2 | 2,3 | 2,5 | 2,7 | 2,9 | 3,1 |
| Fire load | | | | | | | | | |
| Fire load MJ/m | 7,438 | 9,524 | 12,147 | 14,205 | 18,687 | 23,278 | 28,701 | 35,455 | 40,122 |
| Fire load kWh/m | 2,066 | 2,646 | 3,374 | 3,946 | 5,191 | 6,466 | 7,972 | 9,848 | 11,145 |
| Maximum forces during installation when pulling by | | | | | | | | | |
| Max. pulling force by pulling-eye kN | 2,1 | 3,0 | 4,2 | 5,7 | 7,2 | 9,0 | 11,1 | 14,4 | 18,0 |
| Max. pulling force by pulling-stocking kN | 2,1 | 3,0 | 4,2 | 5,7 | 7,2 | 8,5 | 8,5 | 8,5 | 8,5 |
| Minimum bending radii | | | | | | | | | |
| Minimum bending radius, handling mm | 291 | 337 | 378 | 425 | 489 | 540 | 597 | 679 | 724 |
| Minimum bending radius, final bending mm | 204 | 236 | 264 | 298 | 342 | 378 | 418 | 475 | 507 |
| Minimum bending radii | | | | | | | | | |
| During handling and installation, phase conductor cm | 16 | 19 | 23 | 26 | 29 | 32 | 37 | 43 | 46 |
| During handling and installation, cable cm | 29 | 34 | 38 | 43 | 49 | 54 | 60 | 68 | 72 |
| In final installation, phase conductor cm | 11 | 13 | 16 | 18 | 20 | 23 | 26 | 30 | 32 |
| In final installation, cable cm | 20 | 24 | 26 | 30 | 34 | 38 | 42 | 48 | 51 |
| Minimum bending radii | | | | | | | | | |
| During handling and installation, cable m | 0,29 | 0,34 | 0,38 | 0,42 | 0,49 | 0,54 | 0,60 | 0,68 | 0,72 |
| In final installation, cable m | 0,20 | 0,24 | 0,26 | 0,30 | 0,34 | 0,38 | 0,42 | 0,47 | 0,51 |
| DC resistance | | | | | | | | | |
| Max. DC resistance of conductor at 20 °C Ω/km | 0,868 | 0,641 | 0,443 | 0,320 | 0,253 | 0,206 | 0,164 | 0,125 | 0,100 |
| Maximum DC resistance at 20 °C, metal screen Ω/km | 1,15 | 1,15 | 0,868 | 0,641 | 0,443 | 0,443 | 0,320 | 0,253 | 0,206 |

| Technical information | 4x35/16 | 4x50/16 | 4x70/21 | 4x95/29 | 4x120/41 | 4x150/41 | 4x185/57 | 4x240/72 | 4x300/88 |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Current ratings | | | | | | | | | |
| Cables in air (25 °C) | | | | | | | | | |
| two loaded conductor, conductor 70 °C A | 115 | 140 | 180 | 218 | 254 | 293 | 335 | 395 | 457 |
| three loaded conductor, conductor 70 °C A | 100 | 122 | 156 | 190 | 220 | 255 | 291 | 343 | 396 |
| two loaded conductor, conductor 90 °C A | 140 | 171 | 219 | 267 | 312 | 360 | 413 | 489 | 565 |
| three loaded conductor, conductor 90 °C A | 125 | 152 | 194 | 236 | 274 | 316 | 361 | 425 | 490 |
| Cables in air (30 °C) | | | | | | | | | |
| two loaded conductor, conductor 70 °C A | 111 | 135 | 173 | 210 | 244 | 282 | 322 | 380 | 439 |
| three loaded conductor, conductor 70 °C A | 96 | 117 | 150 | 183 | 212 | 245 | 280 | 330 | 381 |
| two loaded conductor, conductor 90 °C A | 135 | 164 | 211 | 257 | 300 | 346 | 397 | 470 | 543 |
| three loaded conductor, conductor 90 °C A | 120 | 146 | 187 | 227 | 263 | 304 | 347 | 409 | 471 |
| Cables in the ground (15 °C and 1,0 K.m/W), Installation depth 0,7 m | | | | | | | | | |
| Cables in the ground, conductor 65 °C A | 125 | 150 | 185 | 220 | 255 | 280 | 330 | 375 | 430 |
| Cables in the ground (20 °C and 2,5 K.m/W), Installation depth 0,7 m | | | | | | | | | |
| Cables in the ground, conductor 90 °C A | 98 | 117 | 144 | 172 | 197 | 220 | 250 | 290 | 326 |
| Maximum thermal short circuit current during 1 s | | | | | | | | | |
| Phase (initial 65 °C, final 250 °C) kA | 3,6 | 5,2 | 7,3 | 9,8 | 12,4 | 15,5 | 19,2 | 24,9 | 31,1 |
| Phase (initial 90 °C, final 250 °C) kA | 3,4 | 4,8 | 6,7 | 9,0 | 11,4 | 14,2 | 17,5 | 22,6 | 28,2 |
| Metal screen (initial 80 °C, final 250 °C) kA | 2,4 | 2,4 | 3,1 | 4,3 | 6,1 | 6,1 | 8,5 | 10,7 | 13,0 |
| Environmental information | | | | | | | | | |
| (A1-A3) GWP emission kgCO ₂ e/km | 5854 | 7606 | 10645 | 14117 | 18425 | 22119 | 27598 | 36140 | 43781 |
| GWP emissions calculation standard | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 | EN15804:2012 + A2:2019 |

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| STANDARD PACKAGES | 4x35/16 | 4x50/16 | 4x70/21 | 4x95/29 | 4x120/41 | 4x150/41 | 4x185/57 | 4x240/72 | 4x300/88 |
|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Product code | 1149254 | 1149255 | 1149256 | 1149257 | 1149258 | 1149259 | 1149260 | 1149261 | 1149262 |
| GTIN code | 6438176300886 | 6438176300916 | 6438176300930 | 6438176300947 | 6438176300954 | 6438176300961 | 6438176300978 | 6438176300985 | 6438176300992 |
| Package | 500 K12 | 1000 K18 | 1000 K20 | 500 K18 | 500 K20 | 500 K20 | 500 K22 | 500 K24 | 500 K26 |
| Product code | 1149254 | 1149255 | 1149256 | | | | | | |
| GTIN code | 6438176300893 | 6438176300909 | 6438176300923 | | | | | | |
| Package | 1000 K16 | 500 K14 | 500 K16 | | | | | | |